

U Series Fan Forced Ceiling Mounted Heaters

Nameplate Model No.	Catalog No.	Watts	Volts
U1000	QCH1101	1000	120
U1500	QCH1151	1500	120
U2004	QCH1202	2000	240
U2007	QCH1207	2000	277

Installation & Maintenance Instructions

Dear Owner,

Congratulations! Thank you for purchasing this new heater manufactured by Marley Engineered Products. You have made a wise investment selecting the highest quality product in the heating industry. Please carefully read the installation and maintenance directions shown in this manual. You should enjoy years of efficient heating comfort with this product from Marley Engineered Products... the industry's leader in design, manufacturing, quality and service.

*... The Employees of
Marley Engineered Products*



WARNING



Read Carefully - These instructions are written to help you prevent difficulties that might arise during installation of heaters. Studying the instructions first may save you considerable time and money later. Observe the following procedures, and cut your installation time to a minimum.

- To prevent electrical shock, disconnect all power coming to heater at main service panel before wiring or servicing.
- All wiring must be in accordance with the National and Local Electrical Codes and the heater must be grounded as a precaution against possible electric shock.
- Verify the power supply voltage coming to heater matches the ratings printed on the heater nameplate before energizing.
- Do not operate heater without grille installed.
- Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock, fire, or damage to the heater.
- To prevent a possible fire, do not block air intakes or exhaust in any manner. Keep combustible materials, such as crates, drapes, etc., away from heater.
- A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable liquids are stored.
- This heater is intended for ceiling installation only, at least 6 feet off the floor. Do not install in walls, floor, or other locations. Do not install closer than 12" to adjacent walls.
- Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
- This heater is not approved for use in hazardous locations as described by the National Fire Protection Association (NFPA) nor in corrosive atmospheres such as marine, green house, or chemical storage areas.

SAVE THESE INSTRUCTIONS

IMPORTANT

WARNING

TO PREVENT HAZARD OF FIRE OR ELECTRICAL SHOCK, DO NOT INSTALL WITHOUT BACK BOX. BACK BOX MUST BE SECURELY MOUNTED TO BUILDING STRUCTURE. BUILDING STRUCTURE MUST BE CAPABLE OF SUPPORTING THE HEATER AND ALL ACCESSORIES (APPROX. 11LBS).

CAUTION

FOR CEILING MOUNTING ONLY. DO NOT INSTALL HEATER CLOSER THAN 6'(1830MM) TO THE FLOOR. DO NOT INSTALL CLOSER THAN 12"(305MM) TO ADJACENT WALL.

FAN DELAY NOTE:

A FAN DELAY IS STANDARD ON THIS HEATER. IN ORDER TO HAVE THE FAN DELAY OPERATE CORRECTLY, SEPARATE WIRING IS REQUIRED BETWEEN THE HEATER AND THE WALL THERMOSTAT.

WARNING

HEATER MUST BE WIRED AS SHOWN IN WIRING DIAGRAM. SEE FIG. 3. WIRING IN ANY OTHER MANNER MAY PREVENT HEATER FROM OPERATING PROPERLY AND COULD LEAD TO PREMATURE FAILURE OR A FIRE.

GENERAL

The heater is designed for recessed installation in 2" X 4" (50mm X 101mm) joist or larger ceiling section using the back box provided. The heater may also be surface mounted by using the Surface Mounting Frame. The heater is intended to be controlled by a single pole, wall mounted thermostat (ordered separately). The heater may be wired with standard building wire (60°C). (See Fan Delay Notice Above). Refer to specification chart (see pg. 4) for correct supply voltage and wire size.

NOTE: The optimum mounting height for this heater is 8' (2440mm) from floor to bottom of back box. In any case do not install closer than 6' (1830mm) from the floor, or closer than 12" (305mm) to adjacent walls.

INSTALLATION OF BACK BOX IN NEW CONSTRUCTION

NOTE: If the finished ceiling surface is already up, follow instructions for "INSTALLATION OF BACK BOX IN EXISTING CONSTRUCTION".

1. Determine which side of the back box is to be mounted against a joist and bend the tabs at the rear corners out 90 degrees so that the back box will be square with the joist after installation. (See Figure 1).
2. Remove one of the knockouts on socket side of the back box and install a cable or conduit connector.
3. Position back box against side of joist and secure using nails or screws as shown in Figure 1.

NOTE: The back box must be installed with the front edge flush with the finished surface.

4. Run power supply cable through the connector, leaving about 8" (203mm) of wire inside the box.
5. Run thermostat cable from wall thermostat to heater location leaving at least 6" (153mm) of cable inside the box. (See Fan Delay Notice.)

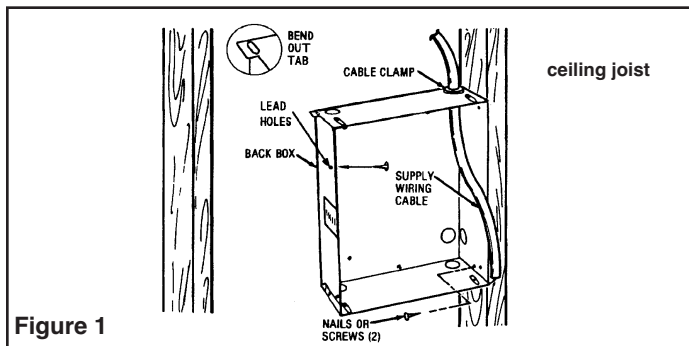


Figure 1

6. Connect the supply cable ground wire to green ground screw provided.

NOTE: Lead holes for a #8 sheet metal screw have been provided in the sides of the back box. After the finished wall or ceiling has been put up, drive a # 8(m4) sheet metal screw (recommended 1") through the side of the box not mounted to the joist. This will prevent the back box from pulling out when installing the heater assembly. (See Figure 1)

INSTALLATION OF BACK BOX IN EXISTING CONSTRUCTION

1. Carefully mark and cut a hole measuring 9-3/8" (235mm) wide by 11-1/8" (283mm) long. One edge of the hole must be cut along the edge of a joist.
2. Proceed to No. 1 through 6 (Installation of Back Box in New Construction).

CAUTION

AN ELECTRICAL SHOCK, FIRE, OR WATER DAMAGE COULD RESULT IF WIRING OR PIPING IS DAMAGED DURING CUTTING. MAKE SURE ALL WIRING AND PIPING ARE CLEAR OF AREA BEFORE CUTTING.

INSTALLATION OF HEATER IN T-BAR CEILING USING CATALOG NUMBER HTBF

1. Determine the desired location for the heater.
2. Remove heater from carton, remove front cover, heater assembly from back box.
3. Remove T-Bar frame, envelope containing mounting screws from carton.
4. Mount the heater backbox to the HTBF kit frame using the four screws provided. Refer to figure 1A.
5. Place the HTBF frame with heater backbox installed in ceiling framing and secure in position. Secure the frame to the building structure as necessary using appropriate wire to prevent the heater and frame from falling.

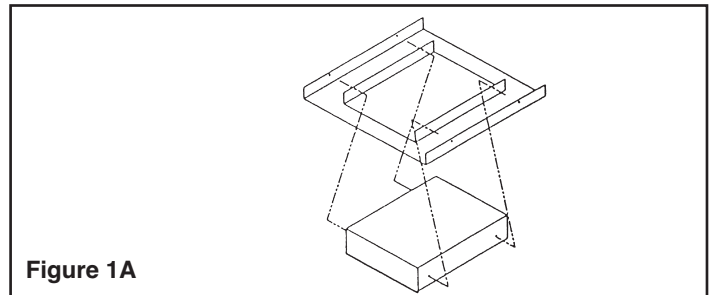


Figure 1A

6. Bring power supply cable to heater location. Remove the desired knockout in backbox and install cable using an appropriate cable clamp, leaving at least six inches (153mm) of wire in box for connections.

NOTE: Power supply cable must enter backbox in location behind the disconnect switch assembly.

7. Complete the installation by following steps 1 through 5 of the "Installation and Wiring of Heater / Fan Assembly" section.

WARNING

Risk of Fire – Do not install heater closer than 12 inches (305mm) from any wall.

Risk of Falling – The heater backbox must be securely mounted to the building structure and the building structure must be capable of supporting the heater with all accessories. The heater weight with accessories is at least 18 lbs.

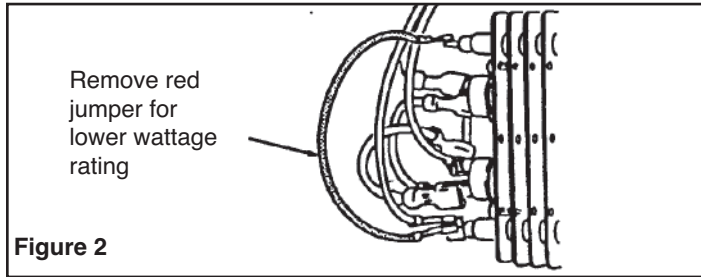
FIELD CONVERSION FOR LOWER WATTAGE RATING

NOTE: Refer to specification chart for lower wattage ratings which are available.

To convert heater to lower wattage rating, completely remove red jumper wire from both heating elements (See Figure 2). Discard this jumper. Be sure remaining wires are securely connected.

INSTALLATION AND WIRING OF HEATER / FAN ASSEMBLY

1. Following wiring diagram (Figure 3) connect supply wiring and thermostat wiring to heater lead wires in back box.



NOTE: For 120 and 277 volt heaters connect the white neutral supply lead to the heaters white pigtail lead, and connect the black supply lead to the heaters black pigtail lead. For 208 and 240 volt heaters change the color of the heaters white pigtail lead to black by wrapping with black electrical tape. (Most electrical codes require the supply leads to be connected to black leads). Then connect the two black supply leads to the two black receptacle leads. Connect the two red thermostat leads to thermostat as shown in wiring diagram.

2. Insert wiring plug from heater/fan assembly into socket in back box.
3. Fit heater/fan assembly into back box and secure in place with (2) screws provided through the center slots in the fan assembly.

NOTE: Use the screws provided by the factory to install heater/fan assembly to the back box.

CAUTION



BE SURE ALL WIRING IS SECURELY ROUTED AWAY FROM FAN AND ELEMENT.

4. Turn disconnect switch mounted on heater/fan assembly "ON".

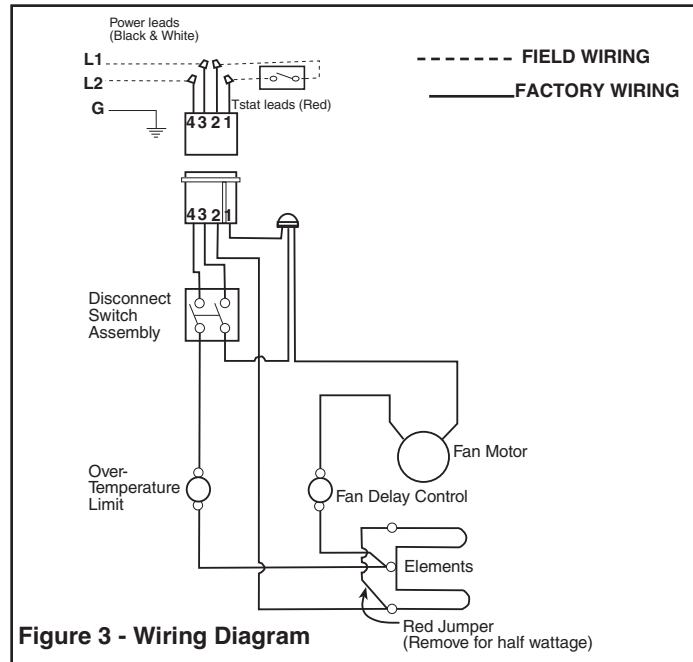


Figure 3 - Wiring Diagram



CAUTION



TO REDUCE RISK OF FIRE OR PERMANENT DAMAGE TO HEATER, THERMOSTAT MUST NOT CUT POWER TO FAN. THERMOSTAT MUST BE WIRED AS SHOWN IN WIRING DIAGRAM SO THAT IT CYCLES HEATING ELEMENTS ONLY.

INSTALLATION OF FRONT COVER (GRILLE)

1. The three grille parts are shipped assembled. Remove the top and bottom plastic pieces from the front cover. A flat blade screwdriver can be used to gently separate the front cover from the plastic pieces.
2. Attach the top and bottom plastic pieces to the heat deck using the four (4) screws provided in the parts bag.

3. Position the front cover so the four (4) holes on the side align with the tabs on the plastic pieces mounted on the heat deck.
4. Hook the front cover over the tabs on one side then rotate the front cover into place making sure that all four tabs are snapped onto the front cover.

HEATER CHECKOUT AND OPERATION

1. After heater is completely assembled, rotate wall thermostat knob counterclockwise until control stops. This is the minimum heat setting.
2. Turn power supply to heater "ON" at main switch panel.
3. Heater should not operate. If it operates, disconnect power and re-check wiring.
4. Rotate wall thermostat knob clockwise until it stops (maximum heat setting) and wait at least 2 minutes. Fan control will delay fan coming on until element is warm.
5. If heater and fan do not come on, disconnect power and check wiring.
6. Allow heater to continue to operate until room temperature reaches desired comfort level. Then rotate wall thermostat knob counterclockwise slowly until thermostat clicks off. Fan must continue to operate for a minute or so until element cools. If fan turns off immediately when thermostat is turned off, disconnect power and check wiring. (See Fan Delay Notice).
7. It may be necessary to readjust thermostat a time or so until exact comfort level is attained. Rotation in the clockwise direction will increase the amount of time the heater will produce heat. Rotation in the counterclockwise direction will reduce the amount of time the heater is on.

NOTE: For best results, the heater should be left "ON" constantly during the heating season as the thermostat, when properly set, will maintain the desired temperature. In the full counter-clockwise position the heater will remain off until the room temperature drops well below freezing.

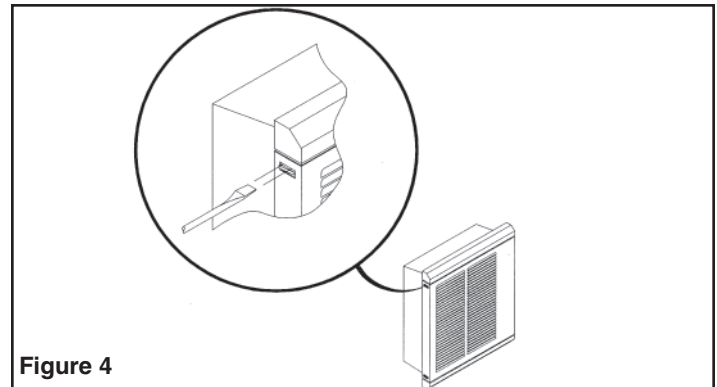


Figure 4

MAINTENANCE AND CLEANING

Your heater is designed for years of trouble-free operation and requires no special maintenance other than occasional cleaning. The motor is permanently lubricated.

Once each year, the heater should be cleaned to remove dust and other foreign material which has collected during the heating season, as follows:

1. Turn power off at main switch.
2. Remove front cover by depressing plastic tabs with a flat bladed screwdriver as shown in Figure 4. Release both tabs on one side then rotate cover off of heater fan assembly.
3. Use vacuum cleaner with brush attachment to remove dust and dirt that has accumulated in heater (especially around element and fan blade). Do not use water or any cleaners to clean heater components.
4. Replace grille.
5. Wipe grille clean with a damp cloth. DO NOT use waxes or any cleaners that leave a residue since these may discolor during heater operation.
6. Turn the main line switch on at the switch panel to restore power to heater. The heater is now ready for another season of operation.

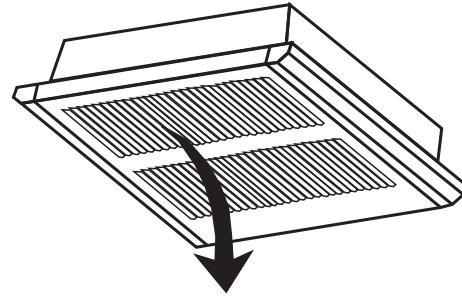
OPERATIONAL NOTICE

Your heater is equipped with an automatic reset over-temperature limit control that will automatically turn the heater off to prevent a fire if the heater overheats.

IMPORTANT INFORMATION

Specifications

MODEL NO.	VOLTS	AMPS	WATTS	BTU/HR	WIRE SIZE
U1000	120	8.40	1000	3413	14AWG
		4.20	500	1706	
U1500	120	12.50	1500	5120	12AWG
		6.25	750	2560	
U2004	240	8.40	2000	6826	14AWG
		4.20	1000	3413	
	208	7.30	1500	5120	
U2007	277	7.2	2000	6826	14AWG
		3.6	1000	3413	
	240	6.3	1500	5120	
		3.1	750	2560	



NAMEPLATE

MODEL NO. **U2004** DATE CODE **0696**
 SMALL CEILING MOUNTED FAN FORCED HEATERS

2000/1000W @ 240VAC 60HZ
 1500/750W @ 208VAC 60HZ



MUST BE USED WITH BACK BOX.
 DO NOT OPERATE WITHOUT FRONT COVER IN PLACE.

MARLEY ENGINEERED PRODUCTS
 BENNETTSVILLE, SC 29512

4104-2170-005

LIMITED WARRANTY

All products manufactured by Marley Engineered Products are warranted against defects in workmanship and materials for one year from date of installation, except heating elements which are warranted against defects in workmanship and materials for five years from date of installation. This warranty does not apply to damage from accident, misuse, or alteration; nor where the connected voltage is more than 5% above the nameplate voltage; nor to equipment improperly installed or wired or maintained in violation of the product's installation instructions. All claims for warranty work must be accompanied by proof of the date of installation.

The customer shall be responsible for all costs incurred in the removal or reinstallation of products, including labor costs, and shipping costs incurred to return products to Marley Engineered Products Service Center. Within the limitations of this warranty, inoperative units should be returned to the nearest Marley authorized service center or the Marley Engineered Products Service Center, and we will repair or replace, at our option, at no charge to you with return freight paid by Marley. It is agreed that such repair or replacement is the exclusive remedy available from Marley Engineered Products.

THE ABOVE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE AFORESAID EXPRESSED WARRANTIES ARE HEREBY DISCLAIMED AND EXCLUDED FROM THIS AGREEMENT. MARLEY ENGINEERED PRODUCTS SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES ARISING WITH RESPECT TO THE PRODUCT, WHETHER BASED UPON NEGLIGENCE, TORT, STRICT LIABILITY, OR CONTRACT.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For the address of your nearest authorized service center, contact Marley Engineered Products in Bennettsville, SC, at 1-800-642-4328. Merchandise returned to the factory must be accompanied by a return authorization and service identification tag, both available from Marley Engineered Products. When requesting return authorization, include all catalog numbers shown on the products.

HOW TO OBTAIN WARRANTY SERVICE AND WARRANTY PARTS PLUS GENERAL INFORMATION

- | | |
|--------------------------------|--------------------------|
| 1. Warranty Service or Parts | 1-800-642-4328 |
| 2. Purchase Replacement Parts | 1-800-654-3545 |
| 3. General Product Information | www.marleymep.com |

Note: When obtaining service always have the following:

1. Model number of the product
2. Date of manufacture
3. Part number or description



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